

## Claims

- [c1] A microchannel plate for receiving photoelectrons comprising:
- a plate-like substrate web formed from a plurality of microtubules of a single type of cladding glass and defining a pair of opposite faces;
  - the substrate web including a plurality of microchannel passages extending between the opposite faces and having openings in both of the opposite faces; and
  - the microchannel openings having a funnel-like opening formed in the substrate web at least one of the opposite faces.
- [c2] The invention of claim [Claim Reference] wherein the microchannel plate is formed from first etching a microchannel plate preform including a core glass and the first cladding glass for a desired period of time to create the funnel-like openings at the intersection of the core and first cladding glass at one of the opposite faces; the microchannel preform having been first etched is then subjected to a second etching process to remove the remaining core glass forming the plate-like substrate web.
- [c3] A method for manufacturing a microchannel plate including the steps of:
- etching a microchannel plate preform having two opposite faces including a core glass and a first cladding glass for a desired period of time to create funnel-like openings at the intersection of the core and first cladding glass at one or both of the opposite faces;
  - subjecting the microchannel preform having been first etched to a second etching process to remove the remaining core glass forming the plate-like substrate web.